A New, Red-Flowered Species of *Tripodanthus* (Loranthaceae) from Colombia

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ABSTRACT. A new species of *Tripodanthus*, *T. belmirensis* Roldán & Kuijt, is described and illustrated from Antioquia, Colombia. In contrast to the other two, more southern species of the genus, *T. acutifolius* (Ruiz & Pavón) Tieghem and *T. flagellaris* (Chamisso & Schlechtendal) Tieghem, it has bright red, much larger flowers. This is the first report of *Tripodanthus* from Colombia.

Key words: Colombia, Loranthaceae, *Tripodanthus*.

A remarkable red-flowered member of the mistletoe family Loranthaceae was collected some years ago in the area of Belmira, Colombia, and the present report documents the species as a member of the genus *Tripodanthus* (Eichler) Tieghem. Until this time, *Tripodanthus* has consisted of two white-flowered species, *T. flagellaris* (Chamisso & Schlechtendal) Tieghem (northern Argentina, adjacent Uruguay, and southern Brazil) and *T. acutifolius* (Ruiz & Pavón) Tieghem (northern Argentina, Uruguay, and southern Brazil to Venezuela; not yet known from Colombia).

Tripodanthus belmirensis Roldán & Kuijt, sp. nov. TYPE: Colombia. Antioquia: Belmira, Finca El Páramo, 3000–3130 m, 6°35′N, 75°32′W, 21 Apr. 1993, *R. Fonnegra & D. Tuberquia 4576* (holotype, HUA; isotype, LEA). Figures 1, 2.

Caulis subquadrangulus, folia opposita, lanceolata. Inflorescentia terminalis, paribus triadarum 5–8. Flores basi lutei, apice rubri.

Robust, glabrous plants lacking epicortical roots on the stem, but base of plant unknown; young stems somewhat fleshy and quadrangular, older stems ± terete and bearing numerous small pustular lenticels; lateral branches subtended by 2 or more pairs of scale leaves; prophylls subtended by distal foliage leaves very prominent, acute, 2 mm long. Leaves paired, when fresh with yellowish to brown margin and prominently raised, yellow lower midrib running into apex or nearly so, lanceolate, to 5 × 2.5 cm, petiole 3–5 mm, canaliculate; apex of blade acute, base obtuse to nearly truncate, venation pinnate. Inflorescences terminating leafy innovations, very compact, with 5 to 8 crowded pairs (sometimes trios?) of triads; triad peduncle angular, 7 mm long, the primary bract 2–5 mm long, caducous; all flowers on pedicels 5 mm long, the two lateral ones with a caducous bract similar to the primary one. Mature bud 3 cm long, straight, bright red above, yellow below, slightly expanded above the calyculus, and narrowing upward but expanding again somewhat below the nearly acute apex, ovary 5 mm long, narrow below, widening to 3 mm above, the calyculus smooth to very shallowly dentate; petals 2.5 cm long, very slightly dimorphic, becoming yellow at anthesis; ligule small, ca. 3 mm above base of petal; filaments 8 mm long, inserted at two different heights on the petals; anthers dorsifixed and versatile, 3 mm long, with small, terminal connectival horn; a few long, unbranched, and very slender yellow hairs also present, growing out from the petals near the insertion of the filaments; nectary small, 6-cornered. Pollen somewhat similar to that of *T. acutifolius* (Feuer & Kuijt, 1980, figs. 23 & 24), polar length ca. 12 μm, diameter slightly more than 20 μm, isopolar, *amb* triangular, deeply concave; tricolpate, syncolpate, the colpal portions nearest the poles psilate but from about halfway to the equator distinctly deepened, this portion also psilate but flanked by small, irregular marginal lobes; colpal margins raised, psilate, continuous across the equator where somewhat widening. Equatorial faces irregularly depressed rugulate-verrucate. Fruit red (*Roldán et al. 2375*).

Assignment of the new species to *Tripodanthus*

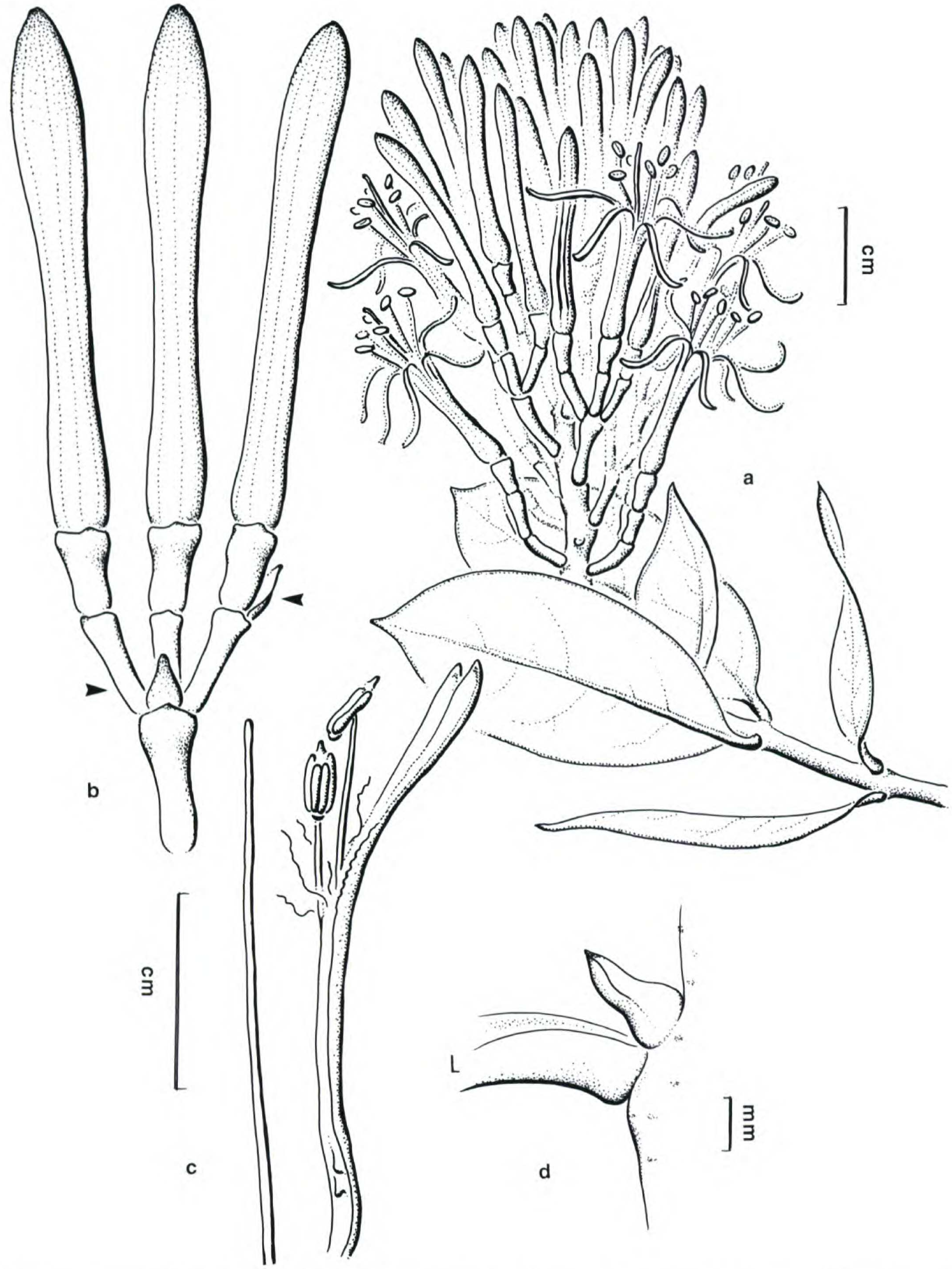

Figure 1. *Tripodanthus belmirensis* Roldán & Kuijt (based on *Fonnegra et al. 5400*, LEA). —a. Habit of flowering shoot. —b. Triad in bud, nearly mature (arrows: caducous bract and bracteole). —c. Style and two petals, and associated stamens, showing dimorphism. —d. Prophyll (L: leaf).

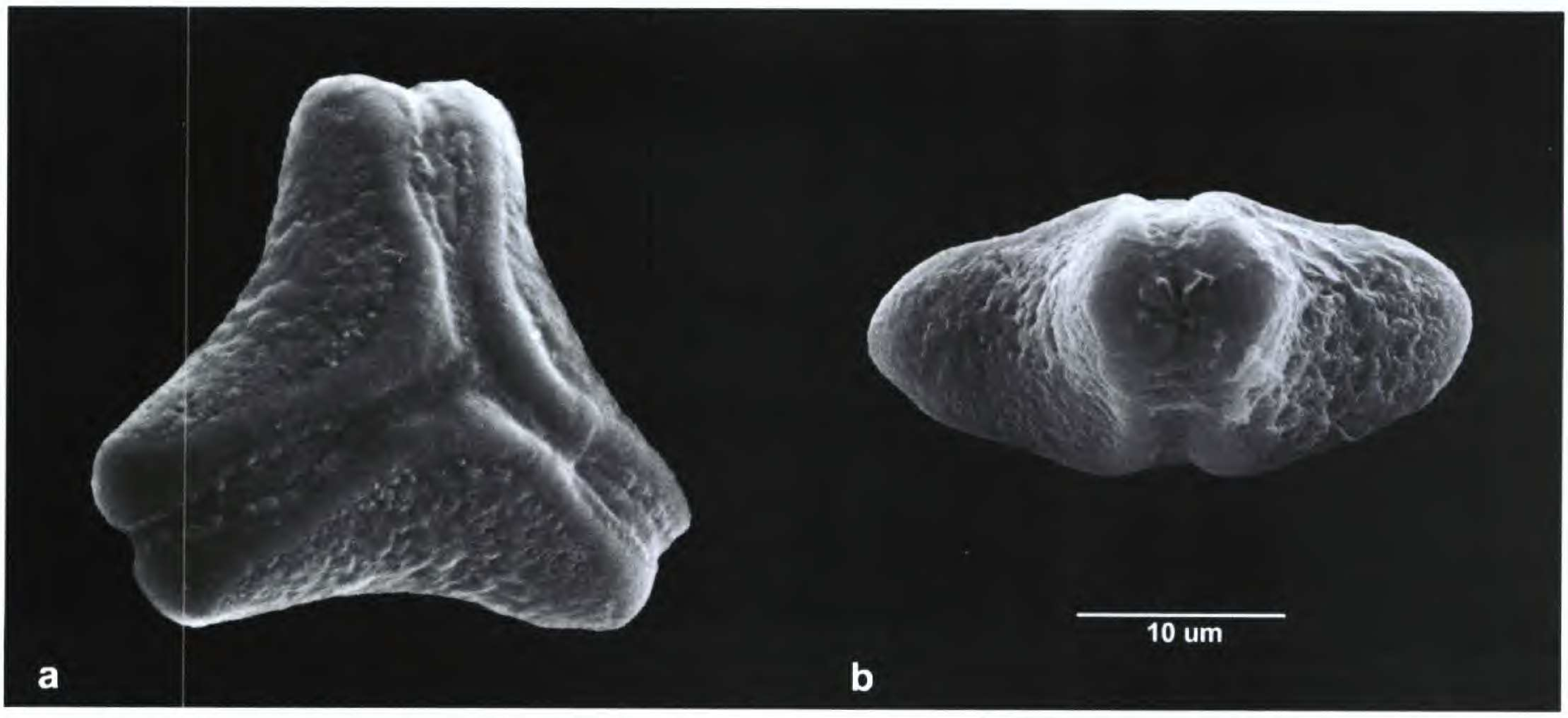

Figure 2. Pollen of *Tripodanthus belmirensis* (based on *Fonnegra et al. 5400*, LEA). —a. Polar view. —b. Equatorial view, showing pore.

would seem to be correct, but its occurrence at high elevation and its isolation from the other two species of *Tripodanthus*, neither of which are known from Colombia, is surprising. Other genera that might be considered briefly are *Gaiadendron* G. Don and *Tristerix* Martius. The former genus reaches from Bolivia to Venezuela and Mt. Roraima, and has the same subpáramo preference as our new species; it also has large bracts and bracteoles and flowers which, however, range from white to golden yellow and nearly orange. Its pollen structure is also somewhat similar to that of *T. belmirensis*, even though the syncolpus is very narrow. *Gaiadendron* shows a series of unique features relating to germination and establishment, which at this time cannot be checked in *T. belmirensis*. Among these are its frequently terrestrial habit, lack of primary haustorium, presence of a tuber in the seedling, and deeply grooved endosperm (Kuijt, 1963). It is extremely unlikely, however, that *T. belmirensis* shares those features.

The general aspect of the plant is much more reminiscent of *Tristerix* than *Tripodanthus*. Its leaves and especially the curious, acute prophylls are similar to those in some *Tristerix* species (Kuijt, 1988; see fig. 16e). Geographically, also, the range of *Tristerix* is suggestive. However, the occurrence of triads in the inflorescence, dimorphic stamens, and palynological details of *T. belmirensis* do not support assignment to *Tristerix* and agree with *Tripodanthus*. Chromosome numbers in *Gaiadendron* and *Tristerix* ($n = 12$) are very different from *Tripodanthus* ($n = 8$) (Barlow & Wiens, 1973), and knowing this characteristic in the new species would provide significant input, as would knowledge of its haustorial attachment; *Gaiadendron* lacks a primary haustorium, and *Tristerix* lacks epicortical roots and, if epicortical roots are present at the base of *T. belmirensis*, this would lend support to the present assignment. The curious caducous bracts and bracteoles are also present in *T. acutifolius* (Abbiatti, 1946, fig. 16A). Palynological features are strongly suggestive of *T. acutifolius* and *T. flagellaris* (Feuer & Kuijt, 1980), the densely packed equatorial rods or shorter sculpturing elements of those species, respectively, here seemingly replaced by a low rugulate-verrucate surface.

Paratypes. VENEZUELA. **Antioquia:** Mpio. Belmira, camino Belmira–San José de la Montaña, finca El Páramo, camino a Labores-San José, 3130 m, 6°35′N, 75°32′W, *Roldán et al. 2375* (HUA, LEA); Finca El Páramo, as the type, *Fonnegra et al. 5400* (HUA, LEA).

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